

disorders.  
XX  
XX  
PS Example 1; Fig 8; 52pp; English.  
XX  
CC The invention relates to an isolated polypeptide comprising a 51 amino  
CC acid sequence being a generic sequence for a Kunitz-type protease  
CC inhibitor or a variant where the sequence is at least 80% identical to  
CC the Kunitz domain of human kunitz type protease inhibitor HKI-18. Also  
CC included are an isolated polypeptide construct encoding kunitz-type of a host  
CC cell comprising a polynucleotide construct encoding kunitz-type protein  
CC in an appropriate growth medium under conditions allowing expression of  
CC the polynucleotide construct and recovering the polypeptide from the  
CC culture medium, a polynucleotide construct encoding the kunitz-type  
CC protein and a host cell comprising the polynucleotide construct. The  
CC kunitz-type protein is used for the preparation of a medicament for the  
CC treatment of systemic inflammatory response syndrome, acute pancreatitis,  
CC shock syndrome, disseminated intravascular coagulation, hyperfibrinolytic  
CC haemorrhage, myocardial infarction, for prevention of blood loss during  
CC major surgery, cardiopulmonary bypass (CPB)-induced pulmonary injury,  
CC allergy-induced protease release, deep vein thrombosis, emphysema,  
CC rheumatoid arthritis, adult respiratory distress syndrome, chronic  
CC inflammatory bowel disease, and psoriasis. The present sequence  
CC represents a mutant human HKI-18 with a yeast 212L signal peptide and a  
CC KEX-2 cleavage site, expressed in yeast cells  
XX  
SQ Sequence 111 AA;  
Query Match 88.4%; Score 291; DB 6; Length 111;  
Best Local Similarity 89.7%; Pred. No. 7,2e-27;  
Matches 52; Conservative 0; Mismatches 6; Indels 0; Gaps 0;  
QY 1 YPVRCILPPATGPKARIIRWYFVAVSGCNRFFVGGCGRGNANNPASBOECSSCGQS 58  
DB 54 YPVRCILPPATGPKARWYFVAVSGCNRFFVGGCGRGNANNPASBOECSSCGQS 111  
RESULT 7  
AAB60623  
ID AAB60623 standard; protein; 58 AA.  
XX  
AC AAB60623;  
XX  
DT 27-APR-2001 (first entry)  
XX  
DE Human protease inhibitor BTL.010 Kunitz domain, SEQ ID NO:1.  
XX  
XX Human BTL.010; neutral serine protease inhibitor; elastase inhibitor;  
XX proteinase-3 inhibitor; Kunitz domain; emphysema;  
XX idiopathic pulmonary fibrosis; adult respiratory distress syndrome;  
XX cystic fibrosis; rheumatoid arthritis; organ failure; glomerulonephritis;  
XX platelet activation; blood coagulation; neutrophil activation;  
XX monocyte activation; angioplasty; inflammatory diseases; lung injury;  
XX vascular injury; nephrotropic; antirheumatic; antiarthritic.  
XX  
OS Homo sapiens.  
XX  
PN US6180607-B1.  
XX  
PD 30-JAN-2001.  
XX  
PF 05-AUG-1999; 99US-00369494.  
XX  
PR 05-AUG-1999; 99US-00369494.  
XX  
PA (DAVI/) DAVIES C.  
XX (CHEN/) CHEN D.  
XX (ROCK/) ROCKZNIK S.  
XX  
PI Davies C, Chen D, Rocznik S;  
XX  
XX WPI: 2001-19060/19.  
XX  
XX N-PsDB; AAF59750.  
XX

Novel serine proteinase inhibitor of the Kunitz family, BTL.010 useful  
for treating emphysema, cystic fibrosis, adult respiratory distress  
syndrome, rheumatoid arthritis, organ failure and glomerulonephritis.  
PS Claim 6; Col 9-10; 17pp; English.  
XX  
XX The invention relates to a novel human serine protease inhibitor of the  
XX Kunitz family, BTL.010 (fragments given in AAB60623, AAB60631 and  
XX AAB60634). The BTL.010 protein is thought to preferentially inhibit  
XX neutral serine proteases such as elastase and proteinase-3, relative to  
XX trypsin-like and chymotrypsin-like proteases. A substantial proportion of  
XX the BTL.010 protein Kunitz domain (AAB60631) was identified via homology  
XX searching in the Genbank high throughput genomic (HTG) DNA sequence  
XX database using the Kunitz domain sequences AAB60630, and was confirmed as  
XX being novel using the Kunitz domain sequences AAB60632, and AAB60633.  
XX This sequence information was extended to provide a larger region of  
XX BTL.010 protein sequence data (AAB60634) by identifying an open reading  
XX frame (ORF) which comprised DNA encoding the BTL.010 Kunitz domain  
XX fragment in a 399 bp fragment of human genomic DNA (AAF59750),  
XX corresponding to bases 16016-16414 of Genbank accession number AC004846.  
XX The entire BTL.010 Kunitz domain sequence (AAB60623) was obtained from  
XX the BTL.010 ORF-encoded sequence. The BTL.010 protein, and pharmaceutical  
XX compositions comprising it, may be used for inhibiting protease activity,  
XX particularly that of leukocyte elastase. In the prevention, treatment or  
XX amelioration of medical conditions such as emphysema, idiopathic  
XX pulmonary fibrosis, adult respiratory distress syndrome, cystic fibrosis,  
XX rheumatoid arthritis, organ failure or glomerulonephritis. BTL.010  
XX conditions of the invention modulate at least one physiological  
XX condition such as platelet activation, blood coagulation, neutrophil  
XX activation, or monocyte activation. BTL.010 is also useful for the  
XX prophylactic or therapeutic treatment of patients undergoing angioplasty,  
XX and for the treatment of inflammatory diseases and diseases involving  
XX lung and vascular injury. The present sequence represents the human  
XX BTL.010 protease inhibitor Kunitz domain  
XX  
SQ Sequence 58 AA;  
Query Match 80.2%; Score 264; DB 4; Length 58;  
Best Local Similarity 82.8%; Pred. No. 6,3e-24;  
Matches 48; Conservative 0; Mismatches 10; Indels 0; Gaps 0;  
QY 1 YPVRCILPPATGPKARIIRWYFVAVSGCNRFFVGGCGRGNANNPASBOECSSCGQS 58  
DB 1 YPVRCILPPATGPKARWYFVAVSGCNRFFVGGCGRGNANNPASBOECSSCGQS 58  
RESULT 8  
AAB61912  
ID AAB61912 standard; protein; 58 AA.  
XX  
AC AAB61912;  
XX  
DT 22-JAN-2003 (first entry)  
XX  
DE Human Kunitz protease inhibitor protein HKI-18.  
XX  
XX Human; protease inhibitor; kunitz; HKI-18; antiinflammatory;  
XX anticoagulant; coagulant; cardiac; CPB; psoriasis; emphysema;  
XX systemic inflammatory response syndrome; acute pancreatitis;  
XX shock syndrome; disseminated intravascular coagulation;  
XX hyperfibrinolytic haemorrhage; myocardial infarction;  
XX cardiopulmonary bypass-induced pulmonary injury; rheumatoid arthritis;  
XX allergy-induced protease release; deep vein thrombosis;  
XX adult respiratory distress syndrome; chronic inflammatory bowel disease.  
XX  
OS Homo sapiens.  
XX  
PN Key Location/Qualifiers  
XX 5.55  
XX Domain /label= Kunitz\_domain  
XX /note="This domain is claimed in claim 18"  
XX  
XX WO200296938-A2.